



The Carolina DX Association

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The Pileup

Newsletter of the CDXA

SEDCO, W4DXCC and the Overmountain Men

By John Scott, K8YC

This is the time of the year plans are being made to journey to Pigeon Forge to attend the W4DXCC event. What some of our newer members might not know is that in 2002, eight souls from the Knoxville area came to the Charlotte Hamfest and graced us with their presence at CDXA's Hamfest banquet. They were soon dubbed "the Tennessee Eight" by Ted Goldthorpe and were regular attendees to Charlotte's Hamfest for a number of years. A few years later when some of that same group established SEDCO (SouthEast DXing and Contesting Organization) as a confer-



ence and encouraged CDXA to support the effort, a gang of CDXA members made the trip over the mountains to Pigeon Forge. CDXA members have been making the trip ever since. SEDCO eventually became a sanctioned ARRL DX event and took the name W4DXCC, but for many it will always be called SEDCO. The W4DXCC event is to be held on September 20-21, 2019. There may still be room for you, but you'd better check for room before going.

The historical past of the Carolinas has a lot of history of meaningful trips over the Blue Ridge as outlined on the front page of the September 2009 issue of the Pileup. It read:

"Overmountain Men" of Modern Times

One cannot live in the history-laden thirteen East Coast states which formed the cradle of America's history without having some of that history rub off on them. Case in point—King's Mountain National Military Park in South Carolina, not far from Shelby, NC. In the American Revolutionary War, British Major Patrick Ferguson offended the sensibility of some of the settlers on the other side of the Blue Ridge in Tennessee by suggesting that as

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CDXA PacketCluster & Other Communication Systems	
K4MD (AR V.4 Cluster via Telnet)	k4md.no-ip.com:23
K4MD (AR V.6 Cluster via Telnet)	k4md.no-ip.com:7373
W4DXA (AR V.6 Cluster via Telnet)	w4dxa.no-ip.com:23
CDXA Repeater 147.18 MHz (+600)	W4DXA, Near Fort Mill, SC
World Wide Web Homepage	www.cdx.org
Wednesday Luncheon (11:30 AM)	Skyland Family Restaurant, 4544 South Boulevard, Charlotte, NC

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soon as he put to rest the rebellious folks on the Carolina Piedmont, he'd cross over the mountains and "Lay waste to their country with fire and sword" using Loyalist Militiamen under his command. Rather than let Ferguson come to them, the Overmountain Men came to Ferguson, gathering countless frontiersmen as they came and confronted him at King's Mountain. In the ensuing battle which was remarkably short, the Patriots handily defeated Ferguson's Loyalist Militiamen, killing or wounding over 400 and taking over 660 prisoners while suffering less than 90 killed and wounded from their ranks.

In 2002, eight Overmountain Men from Knoxville and environs crossed over again to the Carolina Piedmont. But, this time their mission was far more benign. They came as friends to visit the Charlotte Hamfest and to "break bread" with members of the Carolina DX Association. The group became affectionately known as "The Tennessee 8".

When a few of the Tennessee 8 decided to launch an event they named SEDCO five years ago, CDXA decided it was high time the climb over the Blue Ridge should originate from the south side of the mountains and end in Pigeon Forge where the conflagration would consist of only shouts of joyous good fellowship.

In the intervening 10 years since that writing, W4DXCC has grown to be a well-attended event which is as much about meeting old friends as it is about forums related to contesting and DXing. Now, as in the past, the mountains aren't a barrier to friends helping or meeting friends. If you've not been to W4DXCC yet, you might still be able to fit in this year. If not, then put it on your calendar for next fall.

The Pileup

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Published monthly 10 times per year, excluding the months of June and December.

The purpose of the Association is to secure for the members the pleasures and benefits of associating with persons having a common interest in Amateur Radio.

Members of the CDXA shall adhere to "The Amateur's Code" as published from time to time in *The ARRL Handbook for Radio Amateurs*, and shall consist of those valid licensed amateur operators having an interest in promoting amateur radio. Long distance communications (DX) is of special interest to members of the Association, but said interest is not a requirement of membership.

Yearly dues are \$25.00. A second licensed Amateur family member living in the same household can join for \$5.00 for a total family price of \$30.00 per year. The total price for 3 or more licensed family members living in the same household is only \$35.00 per year. All family members enjoy full member status. Dues are payable annually in December by check to the Secretary/Treasurer:

Cliff Wagoner, W3ZL
218 Ohenry Avenue
Davidson, NC 28036

Address, telephone, and email address changes should be directed to the Secretary/Treasurer at the above address or via email at: jew53@cornell.edu.

And, if you've not been to King's Mountain National Military Park to learn about the historical "Overmountain Men" and walk the battleground, I strongly urge you to do so! All you need do is bring your imagination along for your visit.

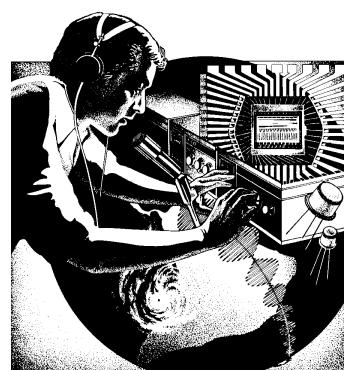
2019 DX King Results through August

John Forbus, NV4A

Our DX King numbers continue to slowly build in spite of the really dreary propagation forecasts. I'm sure FT8 is once again a factor. FT8 (...and this is just my opinion of course) isn't so much fun to use, but it can sure bring in the results. One of the last QSOs I made before taking down the tower was an ATNO using FT8! I should add that there's plenty of room for more entrants, particularly as easy as it is to get in on DX King. Just go to the CQ DX Marathon page, and follow the instructions to load all your 2019 QSOs, whether you have QSLs or not, into a pre-formatted spreadsheet. Then submit the results every month to DX King by going to the CDXA home page, and looking for the CDXA DX King 2019 Score Form. All you need do for the monthly entry is enter your callsign and three summary numbers: entities, zones, and totals of both. That's it!!!

Anyway, here's where we are at the end of August:

Callsign	Category	Countries	Zones	Total
K5EK	Unlimited	252	40	292
K3WA	Unlimited	237	39	276
W4HG	Unlimited	197	38	235
W3GQ	Unlimited	175	35	210
W4PNY	Limited	151	34	185
K8YC	Unlimited	150	32	182
NV4A	Unlimited	133	30	163
W3OA	Unlimited	115	30	145



Six Meter Challenge

John Forbus, NV4A

The number of participants is very slowly creeping up. The main comment I got from people I tackled at the Shelby Hamfest was "I don't have a 6 meter antenna." As I've emphasized several times, if you don't have a 6 meter antenna, try one of your HF antennas, particularly if you have a tri-band yagi. A tri-bander will work quite nicely, as I've mentioned, and as I've proven to myself. You can use upcoming VHF contests to help, and troll the FT8 frequencies. Also, just keep your eyes peeled for 6 meter openings. They can come and go in a hurry. In the meantime, here's where we stood as of the end of August: (...and yes, I know I'm pretty much at the bottom of the list. I was off the air most of June and July ...and now my tower with all its antennas is lying in my backyard. ...at least it didn't fall this time. I took it down to make repairs. I'm awaiting arrival of a part, and can then get it back in the air.)

Call	Category	Grids
W3GQ	High	309
K5EK	High	291
W3OA	Low	278
K7BV	High	179
KZ2I	Low	141
NV4A	High	20
W4WNT	Low	7

**Fall Barbeque Nearer**

The annual Fall Barbeque isn't too far off. We'll be back at Joe and Margaret Blackwell's lovely location on Lake Wylie, SC on Saturday, October 5. The event begins at 4:00PM. Cost is \$10 per person, and a signup sheet is available on the CDXA website. Payment is

via PayPal or a check delivered to Treasurer Cliff Waggoner.

Salads and desserts are to be provided pot luck style. If your last name begins with the letter A through L, you are asked to bring a dessert item. If your last name begins with the letter M through Z, please bring a salad item.

Water will be provided, but you are to bring your own soft drinks or alcoholic beverages.

Complete directions to Joe's from your starting point are available via an applet on the signup sheet.

N4ZC Memorial Award

John Forbus, NV4A

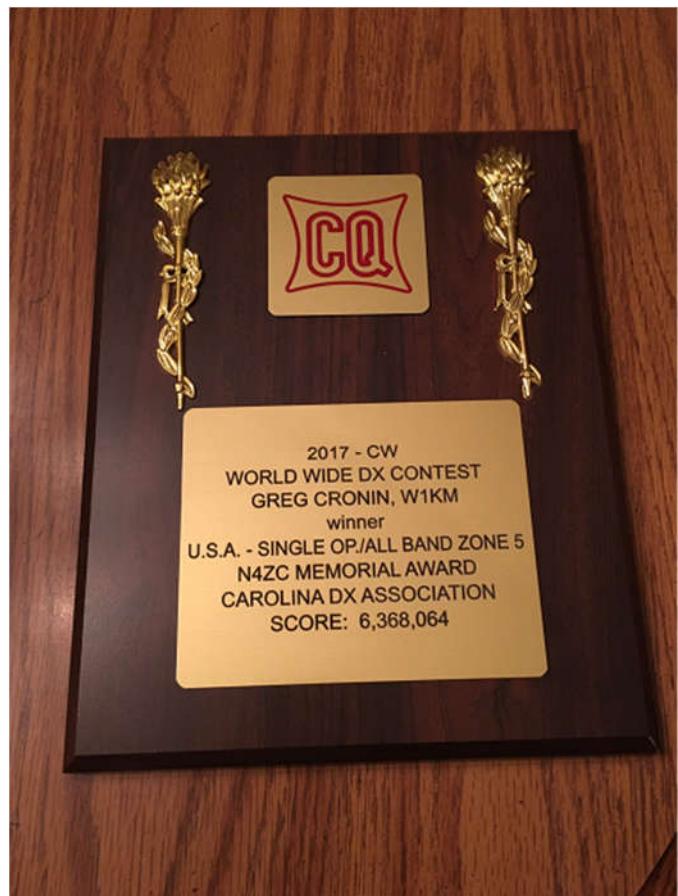
The winner of the N4ZC Memorial Award for the 2017 CQWW DX Contest was nice enough to send CDXA a photo of the plaque, and a nice thank you note:

"Many thanks to the CDXA for sponsoring the N4ZC memorial plaque I just received for the 2017 CQWW CW contest. It's an honor to have a plaque in Roger's memory—I worked him countless times over the years, including when he was KP4AOO. I deeply appreciate your continued support of the CQWW contest and the single-op category.

73
Greg Cronin W1KM "

I'm happy to be able to say that I also worked Roger when he was KP4AOO, and even have the QSL to prove it! This was long before I met Roger and realized what a truly great guy he was for so many reasons. Roger, we all still miss you.

Greg's winning plaque is shown below.



Why Cars Don't Have Those Long Antennas Anymore

By: Jason Torchinsky (<https://jalopnik.com>)

Have you ever wondered about the length of car antennae? Of course you have—you're a human being (or advanced AI, or a brain-augmented dolphin) reading this, and as such you're full of curiosity and wonder and almost crippling physical desires. As such, you've likely noticed that many modern cars have dispensed with the tall, thin "whip" antennae of older cars and now have stubby little antennae, or even little shark fin things. Why is this? Why did we use such long antennae formerly? Were they all the same length? What changed? Why am I a dolphin reading the internet? Relax. I'm here to help.

The antennae I'm going to talk about are the ones most common, still, in cars—radio antennae, designed to pick up (primarily) frequency-modulated (FM) radio signals. Sure, I know you kids with your Spotify and podcasts and Friendster likely don't listen to the old over-the-air radio as much, but it's still a thing, and cars still have antennae.

Now, pretty much anything that conducts will act as a sort of antenna—tinfoil, a coat hanger, some crutches—but in order to optimally capture that electromagnetic radiation and send it into a little box that converts it into electrical impulses that your speakers convert into physical compressions of the surrounding air and your ear-drums convert back into other bioelectric signals and your brain converts into the sweet, sweet strains of *Radar Love*, then, that conductive "whatever" on your auto should be a certain length.

In the case of FM radio, the conductive thing can simply be a metal rod, and, ideally, its length should match the wavelength of an FM signal, which, at about 100 Mhz, comes to around a wavelength of roughly ten feet.



Now, I bet you're thinking, wait a minute there, Jayjay Torch—I've sure as hell never had a car with a freaking *ten foot* antenna! And, of course, you're right. A ten foot antenna would be ridiculous. Luckily, antennas work *almost* (longer antennae do work better, but still)

as good if you make them some reasonable fraction of the wavelength you want to receive—in the case of most car radio antennae, that's about a quarter the wavelength.

So, the standard antenna size on most cars, for decades, was this 1/4 wave antenna size, which comes to about 2.34 feet, or around **31 inches** for FM frequencies. If your car has a telescoping antenna, you can get a good sense of the difference proper length makes by noting how much better reception is when the antenna is fully extended to the 1/4 wavelength size as opposed to shorter.



So what's going on with modern car antennae that are often little fat stumpy things or even shark fin-like projections? Mazda was even so pleased about moving to shark fin-style antennae that they made a whole web page just about that.

In their page about their shark fin antennae, they give a hint about what's going on inside that fin that allows them to get comparatively good reception even when the antenna is clearly much, much smaller than the 1/4 wavelength size of around 31 inches.

Because the antenna cannot be removed and it affects the car's overall height, Mazda's engineers worked on lowering the antenna's height without sacrificing reception. They came up with an idea to change bar-shaped parts to spiral coil, and used electronic substrate to make a receiver.

Many technical challenges were conquered by antenna expert engineers with 25 years of experience in radio wave technology development, and Mazda's very first shark fin antenna was successfully mounted on the CX-5.

The key there is where they talk about a coil; that's also basically the same solution that's employed on most

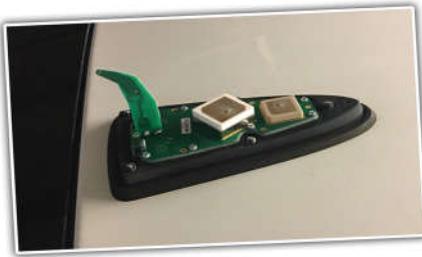
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modern, rubber-coated, stumpy roof-mounted radio antennae.

Inside modern shark-fin-style radio antennae on modern cars, you'll actually find multiple antennae—ones for cell signals, satellite radio, and old AM/FM broadcasts. You can see what the inside of one of these units looks like here, in this Reddit post from some poor guy whose antenna cover flew off his Sonata:



Inside those boxes are coiled antenna wires, length optimized for whatever electromagnetic band they're intended to pick up. Some are simpler inside, like this aftermarket antenna for a Cadillac:



You see the “coil” of conductive copper right in there, and I expect if you were to stretch it out, it'd be about the size of a 1/4 wavelength car antenna, around 31 inches or so, or maybe some close fraction thereof.

Some shark fins don't bother with FM antennae, which are instead integrated into the rear window glass, along with the defroster, or sometimes hidden in places like rear spoilers.

Most shark fin antennae actually kind of compromise FM signals—an old school 1/4 wavelength whip antenna likely will get better reception due to its better gain—but the other antennae it contains (satellite radio, etc.) are now considered more important, as are the improved aesthetics, so we just deal with it, and for the most part, it's fine.

Antenna quality has been sacrificed for aesthetics before, even when AM and FM were important—remember GM's windshield antennae? They were never great, but they were good enough, and arguably gave the cars a cleaner look.

So, I hope this helps. There actually *is* a proper, ideal length for a radio antenna, and modern cars do all they can to hide that from you.

(Thanks to Bill Fisher, W4GRW for sending this article along to the Editor. It is reprinted with permission of its Publisher.)

A few puns for “groan” ups!

I have a split personality, said Tom, being frank.

I have a few jokes about unemployed people, but none of them work.

How do you make holy water? You boil the hell out of it.

Tim Cook, CEO of Apple, named his iPhone “Titanic”. Now when he plugs it in he can say, “The Titanic is synching.”

It's hard to explain puns to kleptomaniacs because they always take things literally.

The difference between a hippo and a zippo is that one is really heavy and the other is a little lighter.

A scene from the picnic at the Shelby Hamfest. . .



President Paul Trotter, AA4ZZ, confers with a few members at the Shelby hamfest, while others rest up a bit before hitting the flea market again.

The Back Page

A little “old” history and “new” history about the Carolinas. See Page 1.

DX King results through the end of August. See Page 2.

Six Meter competition rolls along. See Page 3.

N4ZC Memorial Trophy in CQWW contest scores a hit with its winner. See Page 3.

Where did those **automotive whip antennas** go? See Page 4.